

# The Joint Workshop on an EIC at RHIC

March 10-11, 2011  
BNL



# EIC Task Force

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## ***Preamble of the Charge To the Task Force***

The purpose of this task force is to consolidate and focus a well-defined effort at BNL to develop and advance the science program for an Electron Ion Collider, both for e-A and e-p collisions. Based in the BNL Physics Department, the Task Force will work closely with the accelerator scientists in the C-A Department, and [...]

EIC Task Force Kick-Off Meeting: April 10, 2009

# The Past Two Years (I)

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- Formation of IAC for an EIC
  - ▶ 2 Meetings so far
  - ▶ Broad committee (theory, exp., machine, HEP&NP)
- Staged approach/necessity born
  - ▶ First stage: 2-6 GeV electrons
  - ▶ Second stage: full energy (20-30 GeV)
  - ▶ MeRHIC concept: secondary dog-bone ring at 2 o'clock
- JLAB (ELIC) conducts user meetings on EIC
- BNL TF: Hires of full time EIC postdocs (Thomas Burton, Salvatore Fazio, Tobias Toll)
- MeRHIC discarded - new concept
  - ▶ First stage closer to final version. LINAC and e-rings in RHIC tunnel

# The Past Two Years (II)

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- eSTAR & ePHENIX discussion started
- Long INT Workshop on the Physics of an EIC
  - ▶ “Yellow” book in preparation
  - ▶ Will serve as key input material for EIC White Paper
- PHENIX & STAR Decadal Plans
- STAR forms eSTAR committee
- EIC R&D coordinated through BNL & review committee

# The Next Key Events

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- 2011
  - ▶ IAC Meeting at DIS
  - ▶ DIS with representation of EIC
  - ▶ EIC: White Paper Steering Committee
  - ▶ Work on White Paper
  - ▶ BNL: June User Meeting
  - ▶ eRHIC cost estimate
  - ▶ EIC detector cost estimate
- 2012
  - ▶ White Paper polished and ready
  - ▶ Town Meetings
- Early 2013
  - ▶ NSAC Long Range Plan
    - ◉ EIC aims at top priority for new construction

# Good Time for a Meeting

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- eRHIC machine design getting close
- IR design intensively discussed
- STAR and PHENIX in process of wrapping around the idea of eSTAR/ePHENIX (or not)
  - ▶ Future detector upgrades & eRHIC
- INT helped sharpening/defining physics case
- Requirements for new detector getting defined
- Lots of physics progress and development of tools in EIC TF
- ... but also some confusion about the future plans

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Agenda

# Agenda: Thursday March 10, 2011

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9:00 - 9:	<i>Thomas Ullrich</i>	Welcome and Overview
9:15 - 9:45	<i>Steve Vigdor</i>	eRHIC, RHIC and Future Planning
9:45 - 10:30	<i>Marco Stratmann</i>	Physics case for ep at eRHIC & key measurements
10:30-10:45		Break
10:45-11:30	<i>Raju Venugopalan</i>	The physics case for eA at RHIC & key measurements & relation eA, pA, AA
11:30-12:00	<i>W. Marciano</i>	Electroweak physics at eRHIC
12:00-12:30		Discussion of individual talks
12:30-1:45		Lunch
1:45-2:10	<i>T. Burton/T. Toll</i>	Event generators for eRHIC studies
2:10-2:45	<i>Vadim Ptitsyn</i>	eRHIC design
2:45-3:15	<i>D. Trbojevic</i>	IR Design
3:15-3:30		Break
3:30-4:15	<i>Elke Aschenauer</i>	Physics measurements and their implication on detector/IR design
4:15-5:00	<i>All</i>	Discussion



# Agenda: Friday March 11, 2011

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9:00 - 9:35 Ernst Sichtermann eSTAR

9:35-10:10 Dave Morrison ePHENIX

10:10-10:25 Break

10:25 - 10:45 T. Ludlam

R&D program for an EIC

10:45 - 12:00 All

Discussion: R&D, Studies that  
need to be conducted,  
IR eSTAR/ePHENIX, Polarimetry

# Logistics

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- Agenda, meeting info (EVO), talks at EIC TF Wiki  
Page: <https://wiki.bnl.gov/eic/index.php/2011-03-10>
- Please sign up for the EIC mailing list (eic-bnl-tf):
  - ▶ <https://lists.bnl.gov/mailman/listinfo/eic-bnl-tf-l/>
- For those interested:
  - Social gathering at restaurant tonight (*Painters*)
  - Around 7pm, details later during the day
- Speakers: **Please** send us your talks **before** your talk or hand it to us on memory stick. Off-site folks try to follow the meeting ...